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"..... per litora spargite muscum,  
Naiades, et circum vitreos considite fontes:  
Pollice virgineo teneros hic carpite flores:  
Floribus et pictum, divæ, replete canistrum.  
At vos, o Nymphæ Craterides, ite sub undas;  
Ite, recurvato variata corallia trunco  
Vellite muscosis e rupibus, et mihi conchas  
Ferte, Deæ pelagi, et pingui conchyliis succo."  
*N. Parthenii Giannettasi, Ecl. 1.*

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I.—Corylophidæ [*Coleoptera*] from the *Seychelles and Rangoon*. By HUGH SCOTT, M.A., F.L.S., Curator in Entomology in the University of Cambridge.

[Plates I.–V.]

THE main purpose of this paper is to give an account of the Corylophid beetles obtained by the Percy Sladen Trust Expedition of 1905 and 1908–9 in the Seychelles and other islands of the Western Indian Ocean. But I have also included certain forms taken at Rangoon in 1911. The actual sources of these two sets of material may be considered separately, as follows:—

(A) RANGOON.—The specimens were collected from a nest of *Munia striata*, a bird belonging to the Ploceidæ or weaver-birds, on Oct. 9th, 1911, by Dr. H. H. Marshall, M.O.H., and sent by him in alcohol to Professor G. H. F. Nuttall at the Quick Laboratory, Cambridge. Professor Nuttall kindly handed over the Coleoptera to me. They consist of three species of Corylophidæ—namely, *Anthrolips flavicollis*, Matthews, *Orthoperus munie*, sp. n., and *Orthoperus* sp. indet., as well as a single example of an undetermined

Cucujid which seems closely allied to *Silvanus longicornis*, Gronvelle, a form known from Singapore. In addition to Coleoptera, the tube contained some Lepidopterous larvæ, a spider (*Scytodes* sp.), and some Gamasid mites, all from the same bird's-nest. I do not know of other recorded cases of Corylophidæ being found in birds'-nests, but I have myself taken a specimen of *Orthoperus* from a blackbird's or thrush's nest of the preceding year at Henley-on-Thames, 25. iii. 1910.

(B) SEYCHELLES ISLANDS.—It was intended that all results of the Percy Sladen Trust Expedition should appear together in one publication, but circumstances have rendered this impossible. The work in question consists of certain special volumes of Trans. Linn. Soc. London, five of which are already complete (ser. 2, Zool., vols. xii.-xvi.), while a sixth is in progress: these contain, *inter alia*, a number of reports on insects. In the present paper much the same plan is followed as in my two previous articles on certain groups of Seychelles Coleoptera (*op. cit.* vol. xv. p. 215, 1912; vol. xvi. p. 193, 1913).

No Corylophidæ have been recorded from these islands before. Those dealt with here amount to twelve species, ten of which are described as new (see below, under "*determination of species*"), while one is undetermined and one is referred to a previously described species. They belong to eight genera, one of which is described as new. The series may be briefly analyzed thus:—*Sacium*, 4 spp. n.; *Arthrolips*, 1 sp. n., 1 sp. indet.; *Meioderus*, 1 sp. n.; *Sericoderus* (*Anisomeristes*), 1 sp. n.; *Daubania*, g. n., 1 sp. n.; *Lewisium*, 1 sp. n.; *Rhyphobius*, 1 sp. n.; *Orthoperus*, 1 sp. (previously known).

*Distribution*.—One species, *Rhyphobius aquilinus*, was found only on a coralline island of the Amirantes Group. The other eleven were all taken by the writer in the mountainous granitic islands of the Seychelles proper. Six of these were found exclusively in the island of Silhouette, which was visited only during the drier months of August and September; one was only obtained in Long Island, a small cultivated islet near Mahé, in July, also one of the drier months; the remaining four, including the new genus *Daubania*, were taken in two or more of the larger islands, and in both the drier and wetter seasons.

Two species are represented by single specimens, two (*Sericoderus* and *Lewisium*) by big series of over 50 and of nearly 200 respectively, the remainder by series of from 3 to 15 examples. They were all preserved dry.

Seven kinds were obtained only at high elevations, in the

endemic forests; one (*Arthrolips insulae-longue*), as stated above, only on a cultivated islet. Of the remainder, *Daubania* (gen. nov.) occurred in the high forests and at more moderate elevations, while the two most abundant forms (*Sericoderus* and *Lewisium*) seemed generally distributed from the cultivated country up into the endemic woods at high altitudes.

Most of the material was collected somewhat promiscuously, by general sweeping and beating of vegetation, but in some cases I have exact records of the manner in which specimens were taken. Thus some of the *Sericoderus* and of the *Lewisium* were swept from long grass, and most of the *Sacium picaultianum* were beaten from dead palm-leaves, a very fruitful source of beetle-life. Two individuals of the *Lewisium* were found in a fallen branch containing an ant's nest (see p. 24), though whether their presence was accidental or intentional I cannot say.

*Affinities.*—The world-fauna of creatures so minute as Corylophidæ must be at present but very imperfectly known, therefore it is not profitable to discuss at length the affinities of the Seychelles series. Moreover, having regard to the highly peculiar nature of the endemic vegetation, and to the large number of peculiar insects and other animals existing there, it is probable that some at least of the species herein described will prove to be absolutely confined to these islands. But such indications of affinities as exist may be briefly considered for what they are worth.

The only form referred to a previously described species is *Orthoperus minutissimus*, Matth., hitherto recorded from S. America and W. Indies. The new genus *Daubania* is allied to *Oligarthrum*, known only from S. America, and to *Corylophus*, widely distributed in Europe and Asia. *Meioderus* was previously recorded only from Japan, *Lewisium* from Ceylon and Japan. The other genera are known from all parts of the world.

The Corylophid fauna of Madagascar appears to be very little known. The only species included in Alluaud's 'Liste des Insectes Coléoptères de la Région Malgache' \* (p. 105) is *Sacium monstrosum* (Schaufuss) †, which, from its description, seems quite unlike any of the Seychelles forms. Matthews describes his *Sacium bifasciatum* (Mon. p. 54) from Madagascar, and this is a little like my *Sacium picaultianum*. I have found no further records of Corylophidæ

\* Vol. xxi. of Grandidier's 'Histoire Physique, Naturelle, et Politique de Madagascar,' Paris, 1900.

† = *Clypeaster monstrosus*, Schaufuss, Tijdschr. Ent. xxxiv. 1891, p. 2; Matthews, Mon. Corylophidæ, p. 217.

from Madagascar in the subsequent literature. Reitter's (1908) descriptions of E. African species have been studied, but without seeing specimens it is hard to pronounce on their relationships with those of the Seychelles. In comparing the latter with forms in Matthews's collection, I have several times found that the nearest to the Seychelles species are Oriental forms, from Ceylon, Japan, &c. (*cf.* the distribution of the genera *Meioderus* and *Lewisium*, mentioned above), but the resemblance is not generally very close. However, if these apparent indications of Oriental affinities should prove genuine, this would only tally with what has been found so strongly marked in certain other groups of Seychelles insects.

On the whole, the Seychellean forms are *very minute, even for Corylophide*. In comparing, I have been repeatedly struck with their small size in relation to their congeners.

STRUCTURE.—Various anatomical points are dealt with under the headings of particular genera and species. Thus *secondary sexual characters* have come to light in *Rhyppobius* and *Orthoperus*, and differential specific characters in the form of *antennæ* and *mouth-parts* in certain species of *Sacium*, *Sericoderus*, and *Lewisium*—in *Sacium* also in the form of the *prosternum*. Attention is called to the presence of diverging metasternal striae in *Orthoperus*.

The condition of the *hind wings* is stated, so far as it has been examined, in the case of each particular species. I follow Matthews in using the term "ample" to denote that the wings are not reduced, vestigial, or absent, but much longer than the elytra, under which they are folded. It appears that they are ample in ten out of the fifteen species dealt with below, the remaining five being:—*Arthrolips* sp. indet., wings present but could not be examined; *Arthrolips flavicollis*, Matth., *Orthoperus minutissimus*, Matth., and *Orthoperus* sp. indet., wings not examined; *Rhyppobius aquilinus*, sp. n., wings present and longer than the elytra in the ♂, but seemingly quite absent in the ♀. This last case is interesting, exhibiting a sexual difference in the wing-development. The genus *Rhyppobius* (= *Moronillus*) is said by Ganglbauer (Käf. Mitteleur. iii. pp. 273, 283-4) to have the hind wings quite absent. Matthews makes the less general statement (Mon. pp. 172-3) that these organs are absent in the "genotype," *R. marinus*, Leconte, but says nothing of their condition in the other species. In a pair of the European *R. ruficollis* (Duval) which I have examined I find no trace of hind wings in either sex. I have not investigated their condition in other species of the genus.



Matthews also states (Mon. pp. 109, 115) that the hind wings are either absent or small and narrow in *Sericoderus* and *Anisomeristes*, but in those specimens of *S. (A.) seychellensis*, sp. n., which I have dissected they are much longer than the elytra. For the rest Matthews describes them as "ample" in his diagnoses of all the other genera except six, in which he either states that he had not examined them or does not mention them at all. But in the case of some genera examination of larger numbers both of species and individuals is probably required.

TECHNIQUE.—In fixing the generic position of species I have never relied on general appearance alone, but have in all cases made balsam-preparations of antennæ and mouth-parts for examination under the compound microscope. These preparations are mounted between two cover-slips, one of which is attached to a cardboard framework; the thinness of the glass then allows of both sides of the object being viewed through a high-power objective, while the cardboard framework admits of the preparations being pinned beside the insects. Balsam-preparations appear almost essential in dealing with Corylophidæ, and are indispensable in describing any new genus.

Measurements of length have been made with a calibrated micrometer-eyepiece. Drawings made with the aid of a drawing-apparatus.

For comparison I have used the British Museum Collection, which, including Matthews's Collection and his balsam-preparations, is fairly complete up to the date of his 'Monograph' (1899). Descriptions of older forms not included in the Monograph, and of all species and genera described since, have been consulted.

LITERATURE.—Matthews's 'Monograph of Corylophidæ and Sphæriidæ' appeared in 1899, after its author's decease. A number of species unknown to him were not included in his manuscript, but the editor of the Monograph refers to these on pp. 19-21 and p. 217. The Monograph may therefore be taken as a fairly complete enumeration of the species up to and including 1899.

The following is a list of the subsequent literature, compiled from the 'Zoological Record,' the nature of each work being briefly indicated. Though a catalogue of the family has recently appeared, this list may also be of some use:—

1900. CASEY. Journ. New York Ent. Soc. viii. pp. 60-75, review of N. Amer. forms, describing several new genera and species: *Balthona*, g. n., *Gronerius*, g. n., *Eutritia*, g. n. near *Orthoperus*, *Molamba*, g. n. near *Sacium*.

1900. DODERO. Ann. Mus. Genova, xl. p. 565, records *Sacium formosum*, Matth., from Burmah.
- REITTER. Wien. ent. Zeit. xix. p. 132, synonymic notes; Deutsch. ent. Zeitschr. p. 82, describes *Sericoderus chobauti*, sp. n., from S. France [see 1908].
1901. REITTER. Deutsch. ent. Zeitschr. p. 70, *Orthoperus acariformis*, sp. n., from West Turkestan.
1902. REITTER. Wien. ent. Zeit. xxi. p. 137, *Orthoperus schneideri*, sp. n., from Corsica.
1903. FAUVEL. Rev. Ent. Franc. (Caen), xxii. pp. 289-291, three new species of *Arthrolips* and one of *Corylophus* from New Caledonia\*.
- MORRILL. Ent. News (Philadelphia), xiv. pp. 135-138, pl. vi., metamorphosis of *Corylophodes marginicollis*.
1908. REITTER. Wien. ent. Zeit. xxvii. pp. 59-63, describes a number of forms from E. Africa (*Homogrypinus*, g. n. near *Sericoderus*, and new species of *Sacium*, *Arthrolips*, *Sericoderus*, *Corylophus*, and *Orthoperus*): t. c. p. 198, synonymic notes, and sinks *Sericoderus chobauti*, Reitt. (1900), as a var. of *S. revellieri*, Reitt.
- SCOTT. 'Fauna Hawaiiensis,' iii. pp. 415-8, includes description of *Sacium angusticolle*, sp. n. [omitted by Csiki from his Catalogue, 1910].
1909. REITTER. Bull. Soc. ent. Egypte, i. (1908) p. 40, descr. *Sericoderus (Anisomeristes) pécirkanus*, sp. n., from Egypt.
1910. BLATCHLEY. Bull. Indiana Dept. Geol. i. pp. 501-506, describes Indiana species.
- CSIKI. Rovart. Lapok. xvii. p. 28, synonymic notes and new names; Coleopt. Catalog. (Junk & Schenkling), part 18, pp. 5-28, catalogue of the family.
1912. SHARP and MUIR. Tr. Ent. Soc. London, p. 507, ♂ genital armature.
1913. HETSCHKO. Wien. ent. Zeit. xxxii. p. 181, *Matthewsiella*, nom. nov. for *Microum*.
- REITTER. Deutsche ent. Zeitschr. pp. 653-4, *Sericoderistes*, gen. nov. near *Sericoderus*, with a new species, from Turkestan.
- SAHLBERG. Öfr. Finsk. Vetensk.-Soc. Förh. (Helsingfors), vol. lv. 1912-13, Afd. A, no. 8, p. 12, *Catoptyx levantinus*, sp. n., Lebanon.
1914. BROWN. New Zealand Institute, Bull. 1, part 3, p. 173, *Sacina curtula*, sp. n., New Zealand.

In the following portion of this paper dates in brackets after authors' names refer to the above list.

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\* In this paper Fauvel also records (p. 289) *Arthrolips souverbiei* (Montr.) from New Caledonia. This species was described by Montrouzier from that country as one of the Heteromera, being made the type of a new genus *Apelta* (Ann. Soc. Linn. Lyon, vol. xi. 1864, p. 124), and as such it is included in the Munich Catalogue (vol. vii. p. 1972) under Tenebrionidae. But Fauvel, as stated above, records it as a Corylophid, giving *Apelta* as a synonym of *Arthrolips*. The name *souverbiei* does not, however, appear to be mentioned in Csiki's 'Catalogue of Corylophidae' (1910) either as a valid species or as a synonym.

**TYPES.**—A first set of the material, including the types of the new genus and of all new species, will be placed in the British Museum; a second set will be retained in the Cambridge University Museum.

**SACIUM, Leconte.**

(Pl. I. figs. 1-9.)

*Sacium*, Leconte, Proc. Ac. Philad. vi. 1852, p. 142.

The material includes four species from the Seychelles, all quite distinct from each other and from anything in Matthews's collection; neither do the descriptions of the few species which I have not seen correspond at all with any of the Seychelles forms. Reitter (1908) has described five species from East Africa; but after careful study of his descriptions I conclude that none of my species is identical with any of his.

*Structural Characters.*—In examining the Seychelles collection I have noticed certain structural differences between the species, of a kind which does not seem to have been hitherto employed. Thus, among these four species there are two distinct types of *prosternum*: (i.) of appreciable length in front of the coxæ and furnished with an elevated median keel (fig. 6); (ii.) exceedingly short in front of the coxæ and with no keel (fig. 3); further details are given in the specific descriptions. Matthews (Mon. p. 41) writes "*prosterno parvo, inter coxas elevato . . .*," but makes no statement as to specific differences in its form.

Another category of characters is exhibited by the *mouth-parts*. A balsam-preparation was made in order to fix with certainty the generic position of each species. These preparations exhibit slight differences in the form and relative proportions of such parts as the mentum and joints of the palpi, differences which are briefly mentioned in each description (*cf.* figs. 2, 5, 8, 9).

Characters such as these are not necessary for separating the Seychelles species, which are amply distinct in other ways. But they are indicated in case they should prove useful in further studies of this large genus of minute creatures.

1. *Sacium picaultianum*, sp. n.

(Pl. I. figs. 1-3.)

Oblongo-ovale, supra nitidissimum, fere glabrum: piceo-nigrum, thoracis margine anteriore testaceo, elytris maculis 4 (in utroque

elytro 2) rufo-flavis, corpore subtus rufo-piceo, pedibus rufo-testaceis, antennarum clavis infuscatis; supra tote fortiter dense punctatum, thoracis basi plus minusve regulariter seriatim punctata; metasterno et segmento 1° abdominis subtiliter dense punctatis.

Long. corp. 1.05–1.25 mm.

Oblong-oval, with elytra nearly parallel-sided, not very much broader than the thorax at their widest point; upper surface very shining, with the punctures bearing such excessively short minute hairs (only visible under a compound microscope) that it may almost be called glabrous. *Colour*: thorax pitchy black, with the anterior explanate margin translucent and testaceous, the testaceous colour extending back a little on to the disc in two places, one on either side of the middle line in front; scutellum black; elytra pitchy black, with two reddish-yellow marks on each, the front pair of marks extending from the base to  $\frac{1}{3}$  the length or more, fairly widely separated from the outer margins and at the suture; the hind pair only very narrowly separated at the suture, sometimes quite confluent across it, fairly widely separated from the apex of the elytron, each mark extending obliquely forwards from the suture nearly to the outer margin. In a few examples the spots of the front pair also are nearly confluent across the suture; and in some (possibly immature) the whole elytra are much paler, almost uniform pitchy reddish or even testaceous. Underside reddish pitchy, apex of the abdomen rufescent. Legs reddish testaceous. Clubs of antennæ dark. *Thorax* and *elytra* closely and strongly punctured, the punctures separated by from once to twice their own diameter, the thorax with a basal series of more closely placed punctures (very distinct in the figured specimen, but less regular in others); *elytra* with lateral margins reflexed and visible from directly above throughout the greater part of their length; sutural stria present, obsolete in about the anterior  $\frac{1}{3}$ . *Wings* dissected out and found to be ample. *Metasternum* and *abdomen* finely and closely punctured and finely pubescent; the punctuation more sparse on the postero-median part of the metasternum.

*Prosternum* (Pl. I. fig. 3) extremely short, forming in front of each coxa a bridge so narrow that it can scarcely be seen in looking directly down on to the under surface; there is consequently no room for a median elevated keel in front of the coxæ (contrast *Sacium grossinianum*, fig. 6). A balsam-preparation of the mouth-parts shows that the

mentum (fig. 2) is narrow, pointed in front, and the terminal joints of the labial palpi slightly longer than the second.

*Sacium picaultianum* approaches three species which I have seen—*S. bifasciatum*, Matth. (Madagascar), *S. quadrimaculatum*, Matth. (Ceylon), and *S. flaviventre*, Matth. (Ceylon), Mon. pp. 53, 54. *S. bifasciatum* is slightly longer in proportion, more tapering behind, much more finely punctured, with the basal thoracic series much less distinct, and the light marks on the elytra less sharply defined and differently arranged. *S. quadrimaculatum* and *S. flaviventre* are both larger and differently shaped in outline, having the elytra less parallel-sided and broadening out rather more behind the shoulders; both have the disc of the thorax dark red instead of pitchy black and the marks on the elytra much smaller; moreover, the upper surface is entirely glabrous, the punctures being devoid of even such minute hairs as are present in *S. picaultianum*. The latter is quite distinct from any of the three.

*Loc.* Seychelles: Silhouette Island, 1908.

Fifteen specimens. Nine were beaten from dead palm-leaves on the Mare aux Cochons plateau, over 1000 feet, 25. ix. 1908; five others are from the same locality, though how obtained is not recorded; and one is from the other side of the island, near Mont Pot-à-eau.

Named after Captain Lazare Picault, who commanded one of the earliest expeditions to the Seychelles, in 1742\*.

## 2. *Sacium grossinianum*, sp. n.

(Pl. I. figs. 4-6.)

Oblongo-ovale, supra sat nitidum, subtiliter dense punctatum atque pubescens, piceo-nigrum, thoracis margine anteriore late testaceo, elytris fasciis 2 transversis rufo-flavis, in sutura interdum anguste interruptis; metasterno et segmento 1° abdominis nigris, thorace subtus et segmentis posterioribus rufescentibus, pedibus antennisque rufo-flavis, harum clavis haud nigricantibus.

Long. corp. 1.15 mm.

Oblong-oval, with thorax rather long, its anterior margin forming a curve that narrows considerably in front, and with elytra nearly parallel-sided, but considerably broader than the thorax at their widest point; upper surface fairly shining, covered with fine, short, decumbent, pale pubescence.

\* For this and other historical particulars, see J. Stanley Gardiner, "The Seychelles Archipelago," *Geographical Journal*, Feb. 1907, pp. 148-174.

*Colour*: thorax pitchy black, with front margin rather broadly reddish testaceous; elytra pitchy black, with two broad transverse reddish-yellow fasciæ, the anterior or both of which may be narrowly interrupted by darker colour at the suture, thus almost forming four separate marks; in one example the scutellum is included in the anterior pale fascia, in another it is darker; metasternum and first abdominal segment pitchy black, posterior segments paler; underside of thorax, legs, and antennæ reddish yellow, clubs of the antennæ not black. *Thorax* and *elytra* closely and very finely punctured, the punctures twice their own diameter, or rather more, apart; the thorax has no distinct basal series, but an impressed line immediately before the base; sutural stria present but vanishing in nearly the anterior  $\frac{1}{2}$ ; lateral margins of elytra reflexed through about  $\frac{2}{3}$  the length from the shoulder, visible from directly above. *Wings* apparently ample, but not dissected out. *Metasternum* and *abdomen* finely and closely punctured and pubescent.

*Prosternum* (Pl. I. fig. 6) much longer than in *Sacium picaultianum*, forming in front of each coxa a bridge about half as broad in an antero-posterior direction as the dimensions of the coxæ in the same direction, and having a sharply elevated median longitudinal keel. A balsam-preparation of the mouth-parts shows that the *mentum* (Pl. I. fig. 5) is broader, not pointed in front, more like Matthews's figure (pl. i. D 6).

Several species resemble this in general scheme of colour, but its pubescent surface distinguishes it in many cases, and I have seen none very closely similar to it. Among the other Seychelles species it is abundantly distinct from *S. picaultianum* by its pubescence, its narrower form, finer punctuation, longer prosternum, by the confluence of the light marks on the elytra to form transverse fasciæ, &c.

*Loc.* Seychelles: Silhouette Island.

Three examples, from the same place as most of the preceding species, the Mare aux Cochons plateau or near by, ix. 1908.

Named in memory of Captain Grossin, a member of Picault's expedition to the Seychelles in 1742.

### 3. *Sacium roslanianum*, sp. n. (Pl. I. figs. 7 & 8.)

Late ovale, supra nitidissimum, tote glabrum, modice sat dense punctatum: picco-nigrum, margine anteriore thoracis late pallide testaceo, elytro utroque macula singula media rufo-flava, corpore



subtus piccoo, pedibus piccis vel fusco-testaceis, antennarum clavis fuscis.

Long. corp. 1.0 mm.

Rather shortly and broadly oval, with thorax forming almost a perfect semicircle (not a narrowing curve), and elytra considerably wider than the thorax, reaching their widest point a little before the middle; shining and entirely glabrous above. *Colour*: pitchy black; front margin of the thorax broadly pale testaceous and translucent; each elytron has a median pale spot, narrowly separated from its neighbour at the suture, more widely separated from the outer margin; in one specimen the spots are clear yellow, in others darker, reddish, and suffused; the black ground-colour is slightly diluted at the apices of the elytra; underside pitchy; legs pitchy or fusco-testaceous, with paler tibiæ; head and clubs of antennæ dark. *Thorax* and *elytra* moderately strongly and closely punctured; lateral margins of elytra reflexed throughout the greater part of their length, visible from directly above; sutural stria present, vanishing in the anterior portion. *Wings* apparently ample, but not dissected out. *Metasternum* and *abdomen* with remote punctures bearing fine short hairs, the former nearly impunctate in the middle.

*Prosternum* in front of each coxa forming a bridge of considerable breadth in an antero-posterior direction, and having an elevated median longitudinal keel, *i. e.* approaching the condition found in *Sacium grossinianum* (*cf.* fig. 6). The balsam-preparation of the mouth-parts shows that the *mentum* (fig. 8) is rather narrow and bluntly pointed in front, the apical joints of the *labial palpi* shorter than the second (contrast *S. picaultianum*), and the penultimate (third) joints of the *maxillary palpi* proportionately longer than in some other species.

*Sacium concinnum*, Matth. (Ceylon), *S. formosum*, Matth. (Ceylon), and *S. politum*, Matth. (Japan) [Mon. pp. 52, 56, 57], all have the same general scheme of colour—each elytron with a single pale mark on a dark ground. *S. roslanianum* is, however, quite distinct from them all. *S. concinnum* is differently shaped, having the elytra very little wider than the thorax, its punctuation is much closer, and the light marks on the elytra are more longitudinal in direction and much more widely separated from the outer margins and from one another. *S. formosum* is larger, longer, and narrower, with thorax forming a longer narrowing curve; also its thorax is reddish instead of black, and the pale marks lie farther back on the elytra and are much more widely

separated at the suture; the punctation also is finer. *S. politum* is much larger, proportionately longer, and narrower, with red thorax; its pale marks are much shorter in an antero-posterior direction—*i. e.*, they form a narrow transverse fascia on the elytra.

*Loc.* Seychelles: Silhouette and Mahé, 1908-9.

Five specimens, from the high forests. In Silhouette two were found, near Mont Pot-à-eau (ca. 1500 feet), and at Mare aux Cochons; in Mahé three, from Cascade Estate at about 1000 feet, and from the Mare aux Cochons district at about 1500 feet.

Named after Monsieur du Roslan, under whom an early expedition visited the Seychelles in 1769.

4. *Sacium rochonianum*, sp. n.  
(Pl. I. fig. 9.)

Minutum, ovale, supra nitidissimum, glaberrimum, omnino impunctatum; thorace rufo-flavo: elytris picco-nigris, vel unicoloribus, vel fascia pallida transversa suffusa, plus minusve distincta, munitis; metasterno picco-nigro, abdomine rufescente, ore antennis pedibus flavis, antennarum clavis haud nigricantibus.  
Long. corp. 0.9-1.0 mm.

Minute, oval, the front margin of the thorax forming an elliptical curve narrowing slightly in front, sides of the elytra gradually curved, reaching their widest point a little before the middle; very shining, absolutely impunctate, and glabrous above. *Colour*: thorax unicolorous reddish yellow, rather paler at the front margin; scutellum in most examples reddish yellow, in some darker; elytra pitchy black, diluter at the apices; in some specimens practically unicolorous, but in most there is near the suture just behind the middle a paler area, which, though very indistinct in some, in other cases forms a suffused transverse pale fascia; metasternum pitchy black, underside of thorax yellowish testaceous, of abdomen reddish; head, antennæ, and legs yellow, clubs of the antennæ not darkened. *Elytra* with lateral margins narrowly reflexed throughout most of their length from the shoulder, these margins visible from above immediately behind the shoulder and again in the posterior half, but scarcely visible (or invisible) for a short space just before the middle; sutural stria present, extending forwards a little beyond the middle. *Wings* apparently ample, but not dissected out. *Metasternum* quite smooth, glabrous, and impunctate in the middle, with scanty very short pubescence at the sides; *abdomen* with longer yellowish pubescence.

*Prosternum* formed rather as in *Sacium picaulianum*, very short, forming only a very narrow bridge in front of each coxa, and sloping steeply upwards (*i. e.*, dorsalwards) in the middle in front, not forming a median keel. The balsam-preparation of the mouth-parts shows that the *mentum* (fig. 9) is broader than long (contrast *S. picaulianum*).

No species which I have seen is closely like this. The Hawaiian *S. angusticolle*, Scott (1908, p. 416), resembles it in its minute size and general colour-scheme—red thorax and black elytra. But *S. angusticolle* is distinctly though finely punctured and pubescent above, and is proportionately longer and narrower, less oval in outline, and with elytra less broadened about the middle.

*Loc.* Seychelles: Silhouette, 1908.

Fifteen examples, all from the high endemic forest above Mare aux Cochons, well over 1000 feet.

Named after the Abbé Rochon, a member of du Roslan's expedition in 1769; he left a written record, and his name has been given to a river in Mahé.

#### ARTHROLIPS, Wollaston.

The material includes three species—*A. flavicollis*, Matth., hitherto known from Java, an example of which is now recorded from Rangoon; *A. insulae-longae*, sp. n., from the Seychelles; and an undetermined species from the Seychelles. Since the appearance of Matthews's Monograph, Fauvel (1903) has described three new species from New Caledonia, and Reitter (1908) two new species from East Africa. But those before me do not appear to be identical with any of these.

##### 5. *Arthrolips flavicollis*, Matthews.

*Arthrolips flavicollis*, Matthews, Ann. & Mag. Nat. Hist. (5) vol. xix. 1887, p. 107; Mon. Corylophidae, p. 92.

One example, agreeing closely with the type.

*Loc.* Rangoon; from nest of *Munia striata*, 9. x. 1911 (Dr. H. H. Marshall). Previously recorded from Java.

##### 6. *Arthrolips insulae-longae*, sp. n. (Pl. I. figs. 10, 11.)

Sat breviter ovalis, convexus, nitidus, castaneus, fere unicolor, sed elytris ad latera et antice ad suturam indistincte infuscatiss, pedibus antemisque castaneis, harum clavis haud nigricantibus; corpore supra subtusque dense punctato, pallide pubescente.

Long. corp. 1.15–1.25 mm.

Rather shortly oval, more convex than several of its congeners, shining, castaneous, almost unicolorous above and beneath, but with the front margin of the thorax paler and a dark mark on its disc where the head shows through the chitin, and with indistinct dark areas along the sides of the elytra and near the front part of the suture, the latter forming a median dark mark common to the two elytra; legs and antennæ castaneous, the latter with the clubs not darker; body above and beneath covered with fine pale yellowish pubescence. *Thorax* with base almost straight, only very slightly sinuate on either side of the scutellum, with surface finely punctured, the punctures about twice their own diameter apart. *Scutellum* finely punctured. *Elytra* about as long as their combined breadth, with sutural stria indistinct (not indicated in fig. 10 and in some positions hardly visible) and obsolete in the anterior  $\frac{1}{3}$ , more strongly punctured than the thorax, punctures about twice their own diameter apart; reflexion of lateral margins very slight, scarcely noticeable from above. *Wings* apparently ample, but not dissected out. *Ventral surface* closely punctured, except the middle of the metasternum, which is almost impunctate.

It is not easy to describe the differences separating this form from others. It is not identical with any species I have seen. The following four are selected from Matthews's collection for comparison, as they seem nearest to it. *A. testudinalis*, Woll. (Madeira), is larger, less convex, more parallel-sided, with the dark areas at the sides and suture of the elytra contrasting much more strongly with the paler areas between, and the elytral punctures very much closer. *A. croceus*, Matth. (Siam), is narrower, much less convex, more parallel-sided, and much paler and yellower; in punctuation it is not unlike *A. insula-longæ*. The same remarks apply very nearly to *A. senegalensis*, Matth. *A. westwoodi*, Matth. (Ceylon), is larger, proportionately longer, less convex, and generally lighter in colour, though with the darker areas on the elytra much the same as those of *A. insula-longæ*; its antennæ are much lighter coloured, being bright yellow; in punctuation it is not far removed from *A. insula-longæ*. The latter differs from all these four species in its shorter, more convex, less parallel-sided form, as well as in the other ways mentioned in each separate case.

Reitter (1908, p. 61) has described a species—*A. centrimaculatus*, from East Africa—which seems to resemble *A. insula-longæ* in many respects; but without seeing a specimen it is hard to say exactly how the two forms are related. *A. centrimaculatus* is described as "breviter ovalis,"

but as "levissime convexus" and "dilute fulvus," whereas *A. insulæ-longæ* is more convex than several of its congeners and dark castaneous. The dark areas on the elytra of *A. centrimaculatus* appear to be in the same positions as those of *A. insulæ-longæ*.

*Loc.* Seychelles: Long Island, a small coconut-planted islet close to Mahé, vii. 1908. Eight specimens, obtained by beating (probably from coconut-trees).

#### 7. *Arthrolips* sp.

A single specimen, in bad condition, with one elytron broken. So far as can be seen, the form is rather depressed and suboblong—that is, more nearly parallel-sided than in some allied species. Shining, thorax and elytra pitchy black, the thorax paler (dirty ferruginous) in front, and the apices of the elytra, where the light shows through, appearing pitchy ferruginous. Underside of thorax ferruginous, metasternum and first abdominal segment pitchy, hind margins of abdominal segments testaceous. Legs ferruginous; clubs of antennæ not black. Body above covered with fine pale pubescence, much worn in the unique example. *Thorax* very finely and subobsoletely punctured. *Scutellum* and *elytra* with stronger, larger punctures, about their own diameter apart; sutural stria very fine and close to the suture, but distinguishable through almost the whole length of the elytron excepting right at the base. *Wings* present, but not examined. *Ventrally*, metasternum and first abdominal segment finely and rather closely punctured, the punctation reticulate towards the sides; the pale pubescence is rather dense, especially towards the sides of the sternum and hind margins of the abdominal segments.

Length 1.0 mm.

As the specimen is unique and in bad condition, I have not named it, though it is not identical with any examples I have seen. *A. oblongus*, Matth. (Japan), has the same shape and colour, but is much larger and differently punctured, its thoracic punctures being stronger, while conversely the elytral punctures are finer and more remote.

*Loc.* Seychelles: Silhouette, from Mare aux Cochons or the forest near by, over 1000 feet, 1908.

#### MEIODERUS, Matthews.

*Meioderus*, Matthews, Mon. Corylophidæ, p. 102.

This genus was erected to include a single species—*M. nitidus*, Matth., from Japan,—till now its only known repre-

sentative. The new form described below agrees closely with *M. nitidus* in generic characters—in general shape, form of antennæ, mouth-parts, sterna, tarsi, &c.,—but is quite distinct in specific characters.

8. *Meiolerus quinssyanus*, sp. n.  
(Pl. II. fig. 12.)

Sat late ovalis, supra fortiter nitidus, omnino glaber; prothorace unicolore, rufo, scutello elytrisque unicoloribus, piecis, corpore subtus fusco-testaceo, pedibus antennisque testaceis, harum clavis haud nigricantibus; prothorace fere impunctato, elytris subtiliter remote punctatis, sine stria suturali.

Long. corp. ca. 1.1 mm.

Rather broadly oval, moderately convex, very shining, and quite glabrous above. *Colour*: prothorax unicolorous reddish, the colour broadly diluted at the translucent front margin, scutellum and elytra unicolorous pitchy, underside brownish testaceous, legs and antennæ testaceous, clubs of antennæ not blackened. *Thorax* rather short, its front margin forming a wide curve; for ordinary purposes it may be called impunctate, though under a very high power a few very remote and exceedingly fine punctures are visible, as indicated in fig. 12. *Elytra* gradually curved, with lateral margin narrowly reflexed, though when viewed from directly above this is generally visible only in front, as shown in fig. 12; punctures fine, remote, shallow, slightly elongate; sutural stria entirely absent. *Wings* ample (mounted in balsam). *Metasternum* and *first abdominal segment* glabrous, the former impunctate in the middle, finely and remotely punctured at the sides, the latter finely and remotely punctured.

*M. nitidus*, Matth., is larger, more elongate-ovate in outline, with thorax much darker; the elytra are much deeper black, their punctuation is, if anything, a little stronger, and a sutural stria is discernible in the posterior part; the ventral surface is much blacker and the metasternum more closely punctured at the sides. When the ventral surfaces of *M. nitidus* and *M. quinssyanus* are viewed side by side the greater relative breadth of *M. quinssyanus* is apparent, and the coxæ of its middle and posterior pairs of legs look even more widely distant, *inter se*, in spite of its smaller actual size.

*Loc.* Seychelles: Silhouette, viii.—ix. 1908.

Four examples, one from near Mont Pot-à-can, at about 1500 feet, three from Mare aux Cochons, about 1000 feet.

This species is named after Monsieur Le Queau de Quinssy,



last of the French Governors of the Seychelles, who served the Monarchy, the Republic, the Empire, and, finally, the British Government.

SERICODERUS, Stephens.  
(Pl. II. figs. 13-17.)

Subgenus ANISOMERISTES (Matthews).

*Anisomeristes*, Matthews, Ent. Mo. Mag. xxii. 1886, p. 225; Mon. Corylophidæ, p. 103.  
*Sericoderus*, pars, Reitter.

*Anisomeristes*, treated by Reitter, and here, as a subgenus of *Sericoderus*, is separated from true *Sericoderus* by having 11-jointed instead of 10-jointed antennæ. Otherwise the species of the two subgenera are closely alike, and it is impossible without examination of the antennæ to decide in which of them any particular form should be placed.

The difference is caused by the fusion of two joints—joint 3 and the succeeding one—in *Sericoderus*, s. str. But in some species at least of this subgenus there is a fine transverse line on the third joint, showing where the division would be if it were present. Fig. 17, made from a balsam-preparation, shows the antenna of a British specimen in the Crotch Collection placed as *S. lateralis*; fig. 17a shows the elongated third joint more highly magnified, and it is clear, both from the shape of the joint and the presence of the transverse line, that it is made up of two joints fused. Figs. 16, 16a illustrate the antenna of *S. (A.) pubipennis*, Sharp (Hawaiian Islands), and figs. 15, 15a give that of *S. (A.) seychellensis*, sp. n. In *pubipennis* the separation of the joints is complete, but not so marked as in *seychellensis*; in *pubipennis* the two joints fit together very closely, while in *seychellensis* the distal one is distinctly narrowed at its base. The condition in *S. (A.) pubipennis*, therefore, seems to be transitional between that in *S. (A.) seychellensis* and that in *S. (s. str.) lateralis*. The antennæ also exhibit other differences in length and in the proportions of the joints *inter se*. But appearances are sometimes deceptive, and much depends on the exact position in which the antenna is lying in the balsam.

In many descriptions of *Sericoderus* spp. no mention is made of the antennæ, and the subgeneric position of some species is not satisfactorily established. Owing to this inadequacy of descriptions, it is hard to say exactly how certain described species are related to the Seychelles form. I have named the latter *S. (A.) seychellensis*, though it may possibly prove to

be identical with some described species which I have not seen.

*Condition of hind wings*: see *ante* (p. 4) and below.

9. *Soricoderus* (*Anisomeristes*) *seychellensis*, sp. n.  
(Pl. II. figs. 13-15.)

Oboenicus, nitidus, unicolor flavo-testaceus, pedibus antennisque flavescentibus, harum clavis haud nigricantibus, sat longe aureo-pilosus; prothorace subtiliter punctato, inter punctos laevi; elytris fortius punctatis, inter punctos parum asperatis; antennis curtis.

Long. corp. 0.75-1.0 mm.

Oboenic, of the form characteristic of *Soricoderus*—that is, with thorax broader than elytra and produced at the hind angles, and with elytra narrowing gradually from the base backwards, subtruncate at the apices, and with sides straight, not curved. *S. (A.) seychellensis* is narrower in proportion than some of its congeners. It is shining, unicolorous yellow-testaceous, with legs and antennæ yellowish, the clubs of the latter not (or only very slightly) darkened. Body covered above and below with golden pubescence, rather coarser and longer than, and not quite so close as, in some species. *Thorax* smooth, very finely punctured; *elytra* rougher, with coarser punctuation, which extends right to the base. *Wings* considerably longer than elytra (mounted in balsam).

Of all the forms which I have seen, the Hawaiian *S. (A.) pubipennis*, Sharp\*, is nearest to *S. (A.) seychellensis*, but it is larger and has the pubescence and punctuation denser. It also differs in the form of the antennal joints (figs. 15, 15 a). In *seychellensis* the antennæ are short, less than  $1\frac{1}{2}$  times the breadth of the head, while in *pubipennis* they measure over  $1\frac{1}{2}$  times the breadth of the head. In *seychellensis* joint 2 is short and conspicuously broad in proportion, 3 and 4 are short and transverse, and the division between them is conspicuous, 4 being narrowed at its base, 5 is very little broader than long, 6 much more transverse, 7 conspicuously larger than 8, and the club-joints are short, 9 and 10 both being broader than long. In *pubipennis* (figs. 16, 16 a) joint 2 is proportionately much longer, 4 is differently shaped and much less narrowed at its base, 9 and 10 are longer, being about as long as broad. Perhaps characters of a more definite nature than some of those hitherto used may be found in

\* Tr. Dublin Soc. iii. 1885, p. 128; Matthews, Mon. Corylophidæ, p. 121; Scott, 'Fauna Hawaiensis,' iii. p. 417 (1908).

the antennæ to distinguish a number of forms superficially much alike.

Among species which I have not seen, *S. eichelbaumi*, Reitter (1908, p. 62, E. Africa), seems to resemble *S. (A.) seychellensis* in some respects, but to differ (as, according to Reitter, *l. c.*, does also the Australian *S. pallidulus*, Reitter) in having the punctuation of the elytra obsolete towards the base; also *eichelbaumi* and *pallidulus* presumably belong to the subgenus *Sericoderus*, s. str., though this is not actually stated. Certain forms have been described from Australia by Lea\* and from New Zealand by Broun†, but it is impossible to say exactly how they are related to *S. (A.) seychellensis*. *S. (A.) peirkaanus*, Reitter (1908), from Egypt, is, according to the description, different in shape, colour, and nature of the pubescence.

*Loc.* Seychelles: Silhouette and Mahé, 1903-9.

Over fifty specimens, varying considerably in size. In Silhouette several were swept from a grassy clearing at over 1000 feet, 30. vii. 1908, and a large number were beaten all together from one place on the edge of the forest at Mare aux Cochons, over 1000 feet, in the late afternoon of 18. ix. 1908; others were found in various localities both in the high forests and at lower elevations. In Mahé examples were taken in the high forest of Morne Blanc, on Cascade Estate, &c.

DAUBANIA, gen. nov.

(Pl. I. fig. 18; Pl. III. figs. 19, 21-24.)

Antennæ (ut in *Oligarthro*) 8-articulatæ, sed ab eis *Oligarthri* in forma articularum differentes. Caput sub pronoto omnino obtectum. Genus in forma mandibulorum, maxillarum, labii, *Corylopho* affinis, sed ab hoc genere in numero articularum antennarum differt.

*Form* (fig. 18) oval, narrowed behind, moderately convex, glabrous above. *Head* entirely concealed beneath pronotum. *Antennæ* (fig. 19) 8-jointed; joint 1 long, thickened, curved towards base; 2 pyriform, over twice as long as broad; 3 slender at base, a little longer than broad; 4 small, a little broader than long; 5 may be reckoned as part of the club, it and 6 are about as long as broad; 7 is rather broader than long; 8 is longer than broad and tapers to a blunt apex. *Labrum* (fig. 21) transversely oblong, anterior angles rounded, anterior margin slightly bisinuate. *Mandibles*

\* Proc. Linn. Soc. New South Wales, vol. x. p. 309 (1895).

† Man. New Zealand Col. part 5, p. 1072 (1893).

(fig. 22) armed on the inner margin with a comb of long fine teeth, becoming gradually shorter towards the base. *Maxillæ* (fig. 23) with the lobe finely setose; *maxillary palp* with joint 2 large, obliquely truncate at apex, greatly produced and rounded at the outer apical angle, which bears six long slender laminate processes (cf. *Corylophus*, Matth. Mon. pl. iv. fig. D5), each of which becomes gradually broader from the base outwards, then tapers to a sharp apex; the outermost one is much the longest and is curved, the others become gradually shorter inwards, the innermost ones being almost the same length; joint 3 very short, transverse; joint 4 a little broader than long, produced at the inner apical angle, rounded off at the outer angle, bearing short hairs on the almost truncate apex. *Labium* (fig. 24), so far as can be discerned, shaped like a spear-head; ligula very large and broadly spatulate, truncate at apex, narrowed at base; *labial palpi* short and broad; joints 2 and 3 both broader than long, 2 shaped like an asymmetrical cup produced on the outer side, 3 a little narrower at its base than the apex of 2, its truncate apex shortly setose. *Prothorax* semicircular, anterior margin explanate, base bisinuate, hind angles produced. *Scutellum* triangular, broader than long, apex blunt. *Elytra* very slightly broader behind the shoulders than the base of the thorax, gradually narrowing behind; outer margins not much curved, explanate for about  $\frac{3}{4}$  of their length, the explanate margin disappearing in the posterior  $\frac{1}{4}$ ; posterior outer angles broadly rounded off, posterior inner angles slightly rounded; a fine sutural stria is present, but vanishes in the anterior  $\frac{1}{4}$  of the elytra. *Wings* ample (mounted in balsam). *Pygidium* rounded, projecting a little beyond the elytra. *Midle coxæ* moderately, *hind coxæ* widely, distant.

*Type* of the genus, *Daubania seychellarum*, sp. n.

The only other known genus of Corylophidæ with 8-jointed antennæ is *Oligarthrum*, Matthews (Mon. p. 127, pl. iv. fig. C), established for a single species, *O. waterhousei*, Matth., described from a unique example from Chili. In *Oligarthrum*, however, antennal joints 2-5 differ absolutely in actual form and relative proportions from the corresponding ones in *Daubania*, as will be seen by comparing figs. 19 and 20, the latter of which is copied from Matthews's Monograph; so that, unless many intermediate gradations come to light, the two insects can hardly be classed in one genus.

The mouth-parts of *Oligarthrum* have not been dissected, but Matthews states that, so far as he could see, they resembled those of *Corylophus*. This resemblance is also marked in *Daubania*, as will be seen by comparing my

figures of the latter with Matthews's illustrations of *Corylophus*.

*Daubania* is dedicated to Monsieur and Madame Edouard Dauban, owners of the island of Silhouette, Seychelles.

10. *Daubania seychellarum*, sp. n.

(Pl. I. fig. 18 ; Pl. III. figs. 19, 21-24.)

Nitida, supra glabra, prothorace rufo, elytris piceo-nigris ad apicem parum dilutioribus, ore antennis pedibus rufo-testaceis, antennarum clavis infuscatis ; prothorace subtiliter obsolete punctato, elytris sat dense strigoso-punctatis.

Long. corp. 0·8 mm.

With the characters of the genus. *Colour*: thorax red, anterior margin paler, translucent ; scutellum and elytra pitchy black, the latter diluter towards the apex ; underside reddish brown ; legs, mouth, and antennæ reddish testaceous, the antennæ with clubs infuscate. *Sculpture* &c. : disc of thorax finely and obsoletely punctured ; elytra closely punctured, punctures separated by more than their own diameter, produced into channels or striæ, the general direction of which is longitudinal, though near the suture they become oblique ; though quite distinct, these striæ are not very deep, and under high lights sometimes only the actual punctures are visible. *Pygidium* finely pubescent. *Metasternum* with surface finely alutaceous at the sides, smooth in the middle, and with punctuation and pubescence very scanty ; in one specimen examined it is bare of pubescence in the middle, the first abdominal segment is also nearly bare and has a median longitudinal depression ; in another example this depression is absent, the segment is more pubescent, and the metasternum has some scanty pubescence in the middle in front. These differences possibly may be in part sexual (cf. *Rhyphobius*, p. 26). The other ventral segments are finely punctured and pubescent.

This species is quite distinct in general appearance from all other Seychelles Corylophidæ by its minute size, strigosely punctured elytra, &c. No species of any genus in Matthews's collection superficially resembles it. *Oligarthrum waterhousei* is quite different, being larger, unicolorous blackish, with hind angles of thorax less produced and elytral punctures not drawn out into striolæ.

*Loc.* Seychelles: Silhouette, Mahé, Praslin Islands, 1908-9.

Fourteen examples : in Silhouette, collected at Mare aux Cochons plateau or from the forest near by, over 1000 feet ;

in Mahé, from country above Port Gland, 500–1000 feet, and from the forest on Cascade Estate, between 800 and 2000 feet; Praslin, Côtes d'Or Estate.

# LEWISIUM, Matthews.

(Pl. III. figs. 25–28, 30; Pl. IV. figs. 31, 32, 34, 35.)

*Lewisium*, Matthews, Mon. Corylophidæ, 1899, p. 164, pl. v. fig. A.

*Lewisium* was established for two species—*L. ceylonicum*, Matth. (*op. cit.* p. 166), and *L. japonicum*, Matth. (*op. cit.* p. 167), and no further representative of the genus has since been described. My material contains a long series of a species from the Seychelles, which is referred to *Lewisium* on account of its very close general resemblance to *L. ceylonicum*, but which in the form of its antennæ and mouth-parts differs from that species and in some ways more closely resembles *Catoptyx bowringi*, Matth. (Java), the type of the genus *Catoptyx*\*. The Seychelles form (*L. seychelleanum*, sp. n.) thus seems in some respects intermediate between the types of *Lewisium* and *Catoptyx*, and an examination of the actual parts in *L. ceylonicum* and *L. seychelleanum*, and comparison with Matthews's figures of *Catoptyx* renders one rather doubtful whether the differences between *Lewisium* and *Catoptyx* are more than specific. But one of the chief diagnostic characters of *Catoptyx* is that it has the *anterior angles of the pronotum abruptly inflexed and closely fitted to the sides of the head*, and of this there is no trace in *L. seychelleanum*. Therefore I do not propose to sink *Lewisium* as a synonym of the earlier name *Catoptyx*.

*Antennæ, mouth-parts, &c.*—The antenna of *L. seychelleanum* (figs. 25, 25 a) has the basal joint much thicker, the third joint proportionately much longer, than that of *L. ceylonicum* (figs. 26, 26 a). This forms a ready means of distinction in balsam-preparations. The *labrum* of *L. seychelleanum* (fig. 27) is intermediate between that of *Lewisium* and that of *Catoptyx bowringi* as figured by Matthews (copied in figs. 28, 29), being considerably more tapering than the former but much less acuminate than the latter. The *mandibles* of *L. seychelleanum* are bifid at the distal extremity, each of the two apices being armed with two or three hooks (figs. 30, 30 a)—*i. e.*, rather more complex than those of *Catoptyx bowringi*, which, according to Matthews (pl. vi. fig. B 4), have only a single hook at each apex, but

\* *Catoptyx*, Matthews, Ann. & Mag. Nat. Hist. (5) vol. xix. 1887, p. 111; Mon. Corylophidæ, p. 167, pl. vi. fig. B 1–7.



without the serrations that extend some way down the mandibles of *L. ceylonicum* (cf. Matthews, pl. v. fig. A 4). *Maxillary palpi* of *L. seychelleanum* (fig. 31) with joint 2 much less curved and inflated outwardly, and the apical joint shorter and blunter, than those of *L. ceylonicum* (fig. 32); *maxillary lobes* of *L. seychelleanum* slender, sharply pointed, with inner edge serrate near the apex [Matthews figures the lobes in *Lewisium* as unarmed; but a balsam-preparation of the maxilla of *L. ceylonicum* (fig. 32) shows about six minute teeth near the apex, though these are scattered on the surface, not arranged in a serrate edge as in *L. seychelleanum*]. Fig. 33, copied from Matthews, shows the maxilla of *Catoptyx bowringi* for comparison. *Labial palpi* of *L. seychelleanum* (fig. 34) lying nearly contiguous, not spread apart as in *L. ceylonicum* (fig. 35)\*; fig. 36, copied from Matthews, shows the parts in *Catoptyx bowringi*. Therefore in the maxillæ and labium *L. seychelleanum* seems in several points to resemble *Catoptyx bowringi* more closely. *Tarsi* of all three pairs in *L. seychelleanum* broadly dilated and bilobed, the lobes pubescent.

11. *Lewisium seychelleanum*, sp. n.

(Pl. III. figs. 25, 27, 30; Pl. IV. figs. 31, 34.)

Late ovale, postice perparum angustatum, valde convexum, nitidissimum, supra glabrum; piceo-nigrum, prothoracis margine antico pallide testaceo et pellucido, disco prothoracis ante scutellum, scutello ipso, elytrorum sutura et marginibus exterioribus (his anguste) piceo-rufis, antennis pedibusque rufo-testaceis, antennarum clavis haud nigricantibus; prothorace fere impunctato, elytris dense sat fortiter confuse punctatis. *Lewisio ceylonico* simile, sed statura minus, et differt in forma antennarum, mandibulorum, &c., quæ vide supra.

Long. corp. 1.05–1.1 mm.

Broadly oval, slightly narrowed behind, very convex, very shining, glabrous. Pitchy black, with anterior margin of the thorax pale testaceous and pellucid, and the middle of the disc of the thorax before the base, together with the scutellum and suture of the elytra, lighter—i. e., pitchy reddish; outer margins of the elytra also narrowly reddish [in a few specimens the reddish colour is more extended and the whole body is a little lighter]; underside pitchy reddish, centre of metasternum and first abdominal segment darker; legs, mouth,

\* Too much reliance must not be placed on this difference, which may be partly due to greater pressure of the coverslip in one preparation than in the other.

and antennæ reddish testaceous, clubs of the antennæ not blackened. *Thorax* and *scutellum* under a powerful hand-lens appearing impunctate, but under a compound microscope the thorax is seen to bear numerous very fine subobsolete punctures. *Elytra* closely and strongly punctured, punctures separated by once to twice their own diameter; sutural stria not distinguishable. *Wings* dissected out and found to be ample. *Metasternum* rather closely and strongly punctured towards the sides, but with the elevated central part almost impunctate. *Abdomen* ventrally clothed with fairly close, fine, short hairs.

In general appearance closely resembling *L. ceylonicum*, Matth., which is, however, distinctly larger. The example of *L. ceylonicum* before me appears a very little less convex, has scarcely any reddish colour along the suture of the elytra, the elytra even more strongly punctured, and the metasternum almost impunctate at the sides as well as slightly less elevated in the middle. But differences of a more definite character lie in the form of antennæ and mouth-parts, as stated above.

*L. seychelleanum* is quite distinct in size and general appearance from the other previously described species of the genus—i. e., *L. japonicum*, Matth., and also from *Catoptyx bowringi*, Matth. A second species of *Catoptyx* has been described recently by Sahlberg (1913)—*C. levantinus*, from the Lebanon; but this is said to have the elytra "obsolete punctata" and the third joint of the antenna as long as broad, and must be quite different from *L. seychelleanum*.

*Loc.* Seychelles: Silhouette, Mahé, Long, Praslin, and Félicité Islands, 1908-9. Found much more abundantly than any other species, over 190 specimens being taken; the distribution seems fairly general, from sea-level and the cultivated country up into the endemic forests. In Silhouette many examples were collected from near Mont Pot-à-eau, ca. 1500 feet, and from Mare aux Cochons; a number were swept from long grass; one is recorded as beaten from dead palm-leaves; two were found in fallen dry branches containing nests of the ant *Pheidole punctulata*, Mayr (A. Forel det.), on the coast near Pointe Étienne, 17. ix. 1908. In Mahé, generally distributed from the cultivated country up to elevations of over 1000 feet. In Long Island, a cultivated islet near Mahé, a specimen was taken from the beach just above high-water mark.

## RHYPوبيUS, Leconte.

*Rhyppobius*, Leconte, Proc. Ac. Philad. vi. 1852, p. 141.

*Moronillus*, Jacqu.-Duval, Ann. Soc. Ent. France, 1854, Bull. p. 38 ;

Gen. Col. Eur. vol. ii. 1857-59, p. 234.

Nec *Glaeosoma*, Wollaston, Ins. Mader. 1854, p. 480, pl. x. fig. 7.

*Rhyppobius*, founded on the North-American *R. marinus*, Leconte, was originally (but erroneously) described as having 9-jointed antennæ. *Moronillus* was erected to contain the European *M. ruficollis*, Duval, and was correctly described as having the antennæ of eleven joints. In 1883 Leconte and Horn [Classif. Col. N. Amer. (Smithson. Misc. Coll. xxvi.) p. 113] asserted that *Rhyppobius* and *Moronillus* are really the same, and admitted that Leconte had wrongly stated the number of antennal joints in his original description of *Rhyppobius*. Matthews also followed these writers in regarding *Moronillus* as a synonym of *Rhyppobius* (Mon. Coryloph. p. 173). Ganglbauer, however (Käf. Mitteleur. iii. 1899, p. 283, footnote), was not satisfied that the number of antennal joints is really the same in the two cases, and therefore employed the name *Moronillus* as distinct from *Rhyppobius*. I have made a balsam-preparation of the antenna of a specimen of *R. marinus*, Leconte, from Matthews's Collection. It is undoubtedly 11-jointed, and closely resembles that of *R. aquilinus*, sp. n. (fig. 38). Leconte and Horn and Matthews were therefore right in regarding the number of joints as the same in the type-species of *Rhyppobius* and *Moronillus*. The character separating the two disappears, and *Moronillus* must be treated as a synonym of *Rhyppobius*. A preparation of the antenna of the West-Indian *R. brevicornis*, Matth., also shows eleven joints.

These remarks, however, do not apply to *Glaeosoma*, Wollaston. This genus was founded for *Glaeosoma velox*, Woll., which was described from a unique example found in Madeira, but of which other examples, subsequently taken in North Africa, are also to be seen in the British Museum. Wollaston described and figured the genus as having 10-jointed antennæ (an assertion which I am glad to be able to confirm, below). But Duval, in his Gen. Col. Europe, sank *Glaeosoma* as a synonym of his genus *Moronillus*. To this Wollaston replied in his 'Coleoptera Atlantidum' (1865, pp. 93-5, and footnotes), saying that he had carefully re-examined the type of *G. velox*, and was convinced that his original figure and description were correct, that the antennæ were really 10-jointed, and that the joints differed in form

*inter se* from those of *Moronillus*. Nevertheless, Leeonte and Horn and Matthews regarded *Gleosoma* (like *Moronillus*) as a synonym of *Rhyppobius*; but Ganglbauer (*l. c.*) was not convinced, and Casey (1900, p. 65) wrote that *Gleosoma* is altogether distinct from *Rhyppobius*. I have examined the type of *G. valer* under the highest power applicable to a carded specimen, and found that the antennæ appeared almost certainly 10-jointed; but being still not satisfied, I mounted in balsam the antenna of one of the North-African specimens, which seem absolutely identical with the type. This antenna (fig. 39) is 10-jointed, having between the second and the next large joint one small joint less than in *Rhyppobius*, and, as stated by Wollaston, the form and proportions of the joints differ from those of *Rhyppobius*. The three joints (5, 6, 7) preceding the three club-joints are all much longer in proportion than the corresponding three (6, 7, 8) in *Rhyppobius*, and the large middle one of the three especially is of a different shape.

If the number of antennal joints be used as the criterion for separating the genera, the matter may be summarized thus:—

*Rhyppobius* (= *Moronillus*), antennæ 11-jointed.

*Gleosoma*, antennæ 10-jointed.

*Secondary Sexual Characters*.—I do not know of any reference to these in *Rhyppobius*. But the material before me includes three specimens of a species, apparently new, two of which have a marked impression on the metasternum, while in the third this is quite absent. In comparing certain other species with mine, it was seen that some examples have impressions on the metasternum and sometimes on the first abdominal segment as well. Having before me two specimens of *Rhyppobius ruficollis* (Duval), one of which has the sternum impressed while the other has not, I dissected these and found that the insect with impressed sternum is ♂, while the other is ♀. I therefore infer that the ventral impressions are a ♂ character, though further study is needed to prove whether they are present in all or only in some species. Those in which they have so far been observed are:—

(i.) *R. ruficollis* (Duval). ♂: a rather faint and narrow longitudinal impression on the posterior  $\frac{2}{3}$  of the metasternum, and a long narrow impression down the middle of the first abdominal segment.

(ii.) *R. brevicornis*, Matth., ♂: a deep and rather broader longitudinal impression on the metasternum; on the first abdominal segment a very broad and deep impression, extending the whole length of the segment and nearly the

whole distance between the hind coxæ ; on either side of the impression the segment is raised into a ridge which bears rather long pubescence.

(iii.) *R. aquilinus*, sp. n., ♂ : a marked longitudinal impression, broadening behind, along the posterior  $\frac{3}{4}$  of the metasternum, the pubescence in the impression being much closer than on either side of it ; first abdominal segment with no impression, but with a little median group of hairs.

*Condition of hind wings* : see *ante* (p. 4), and below.

12. *Rhyphobius aquilinus*, sp. n.  
(Pl. IV. fig. 37 ; Pl. V. fig. 38.)

Ovalis, postice haud fortiter attenuatus, supra subtusque subtilissime alutaceus, thorace rufo-flavo, elytris castaneo-brunneis postice ad suturam interdum rufescentibus, pedibus antennisque flavescentibus, harum clavis haud nigricantibus ; thorace impunctato ; elytris punctis duplicibus sat confertim munitis ; metasterno ♂ in medio longitudinaliter valde impresso, segmento 1° abdominis haud impresso.

Long. corp. 0·85 mm.

Outline shown in fig. 37 ; the thorax appears a little shorter than it actually is, owing to its being bent down ; length of the elytra very nearly equal to their combined breadth, which is greatest a little before the middle. Body above shining, glabrous ; finely and closely alutaceous above and beneath. *Colour* : thorax reddish yellow, elytra dark castaneous brown, in the type-specimen lighter and more reddish in the posterior half near the suture ; ventral surface castaneous brown, antennæ and legs yellowish, clubs of the antennæ not blackened. *Antennæ* (fig. 38) a little longer than the width of the head from eye to eye. *Thorax* narrowly margined at the sides, with base very shallowly sinuate on either side of the middle, and hind angles (seen from the side) slightly less than right angles ; surface impunctate. *Scutellum* rounded. *Elytra* with lateral margins narrowly reflexed, but in viewing a specimen from vertically above the margins are only visible behind the shoulder and again for a short space behind the middle ; sutural stria quite absent ; surface with fine double punctures, each consisting of two slightly elongated punctures lying close side by side\* ; in a transverse direction the double punctures are about their own diameter apart, but in a longitudinal direction about twice this distance. *Wings* : no trace of these

\* The alutaceous surface and double punctures are characteristic of a number of other members of the genus.

organs can be seen under the partly opened elytra of the single ♀, but actual dissection and search for minute vestigial wings is prevented by the necessity of preserving the specimen intact; the two ♂ have ample wings, folded under the elytra; one of these organs is mounted in balsam, but I have failed to unfold it completely, so cannot state its proportions to the elytron accurately; it is, however, considerably longer than the elytron (see p. 4). *Metasternum* ♂ with a marked median longitudinal impression broadening behind, on the posterior  $\frac{3}{4}$  of its length; surface of the metasternum almost impunctate, with pale short hairs, closer in the impression, very scanty at the sides; in the ♀ the metasternum is convex and glabrous in the middle. *First abdominal segment*: ♂, with no impression, but with a median group of a few short hairs, on either side of which it is bare, but has a few other hairs near the lateral margins; ♀, no median group of hairs. The other segments bear scanty pale pubescence.

This species is quite distinct from any I have seen. The form most closely resembling it superficially is *R. brevicornis*, Matth. (West Indies). A ♂ of this, now before me, is the same size, but more attenuated behind; the reticulation of its thorax is slightly less marked, while its elytral punctures are a little stronger; and it differs decidedly in the nature of its ♂ ventral impressions (*vide supra*, p. 26).

*Loc.* Amirantes Islands. Three specimens from Eagle Island, 1905 (H.M.S. 'Sealark' Expedition).

Named "*aquilinus*" in allusion to the island of its discovery.

#### ORTHOPERUS, Stephens.

(Pl. IV. figs. 40, 41; Pl. V. figs. 42-44.)

The material includes at least two, possibly three, species of this genus: a new and very distinct form from Rangoon; a single ♂ from the Seychelles, referred to a species known from S. America and W. Indies; and a single indeterminable specimen from Rangoon, possibly the ♀ of the preceding, possibly distinct.

*Diverging Striæ on Metasternum.*—I have found in the literature no mention of diverging striæ or lines on the metasternum, curving round behind the middle coxæ (fig. 41, l.); yet they are present in a number of species. They recall the diverging striæ found in a similar position in *Acritus* and other Histeridæ, but in these there is a second pair of diverging striæ behind the hind coxæ on the first abdominal



segment, while in the *Orthoperi* there is only the pair on the metasternum. The species in which I have seen them are :—*æqualis*, Sharp, *atomarius*, Heer, *brunnipes*, Gyll., *coriaceus*, Rey, *crotchii*, Matth., *kluki*, Wank., *munie*, sp. n., *ovatus*, Matth. I have not examined the other species of the genus as to whether these striæ are present or not.

*Secondary Sexual Characters.*—More than one writer has noted that the front tibiæ of some *Orthoperus* are long and incurved at the apex. Thus Matthews, in his description of the genus (Mon. p. 182), “[anterior] tibiæ often very long and much incurved, abruptly incurved at the apex”; and again, in his descriptions of some of the species, “anterior tibiæ very long and strongly incurved,” or, contrariwise, “anterior tibiæ nearly straight” (see also his figure, pl. vii. fig. A 1). But it does not seem to have been stated that this difference in the form of the tibiæ is, in some species at least, sexual. Thus, in *O. munie*, sp. n., the front tibiæ of some specimens, which I infer to be ♂, are more incurved towards the apex, and have a sharp heel or spur at the inner apical angle (fig. 42); while those of other examples, presumably ♀, which in all other external characters appear identical with the preceding, are straighter and have no such heel (fig. 43). In this case the curvature of the ♂ tibia is not very marked, but it is much greater in *O. minutissimus*, Matth. (fig. 44). Dr. Sharp has pointed out to me the same kind of sexual difference in the form of the front tibiæ in some of our British *Orthoperus*. The divergence of the sexes in this respect is sometimes quite sufficient to be seen with a hand-lens.

Casey (1908, p. 65) describes for certain North-American forms a new genus *Eutrilia*, one of the principal characters of which is that it has the front tibiæ more flattened and less incurved at the apex than in *Orthoperus*. It will be necessary to discriminate between sexual and other differences before the limits of the two genera are made quite clear.

13. *Orthoperus munie*, sp. n.  
(Pl. IV. figs. 40, 41; Pl. V. figs. 42, 43.)

*Ovatus*, valde convexus, nitidissimus, glaber, picco-fuscus, pedibus antennisque testaceis, harum clavis infuscatis; thorace serie basali punctorum fortium ad latera hand attingente, in medio a basi magis distante, munito, disco subtilissime ac subobsolete punctato; elytris sat dense sed subtilissime ac subobsolete punctatis; ♂ tibiis anterioribus ad apicem parum incurvatis, angulo apicali interiore producto.

Long. corp. 0·7 min.

Ovate, very convex, shining, smooth (not at all alutaceous), and quite glabrous above; body above and beneath and head pitchy fuscous; legs, palpi, and antennae testaceous, clubs of the latter infascate. *Head* impunctate. *Thorax* with its base sinuate on either side and produced backwards in the middle, with lateral margins (seen from the side) slightly sinuate in the middle, hind angles nearly right angles; with a strong basal series of rather elongate punctures, becoming obsolete at the sides, further removed from the actual base in the middle than at the ends of the series [it recalls the basal series of some species of *Aceritis*]; disc bearing a number of very fine subobsolete punctures, but in some lights and positions these are scarcely visible. *Elytra* of nearly the same length as their combined breadth, considerably larger than the abdomen, the outline of which is shown in fig. 40 appearing through the elytra as a dotted line (perhaps some allowance must be made for shrinkage of the abdomen); lateral margins not visible from directly above; the elytra have no trace of a sutural stria, and are finely and rather closely punctate; the punctures under a high power appear as fine elongate dashes, closer at the base and suture, and almost obsolete towards the apex (like those on the thorax, the punctures in some lights and aspects are difficult to see owing to their shallowness). *Wings* ample. *Metasternum* (fig. 41) very convex, impunctate in the middle, finely punctured at the sides, the diverging striae behind the middle coxae are punctured and run in a continuous curve from the anterior to the lateral margins of the metasternum. *Abdomen* in several specimens tapering to a blunt point, first segment almost impunctate, each segment with a series of very fine short hairs, rather wide apart. *Front tibia* of ♂ (fig. 42) slightly incurved towards the apex, with the inner apical angle produced into a sharp heel; in both ♂ and ♀ (for the latter sex, see fig. 43) the excavation of the outer margin towards the apex is conspicuous. No other external sexual distinction is visible.

No species in Matthews's Collection resembles this at all closely, and those described since his time seem quite different. *O. japonicus*, Matth., has a basal thoracic series of punctures, but they are much finer; it is much larger than *O. muriei*, has a minutely reticulate surface, and much closer elytral and thoracic punctuation.

*Loc.* Rangoon. Six examples, found in nest of *Munia striata*, 9. x. 1911 (*Dr. H. H. Marshall*).

14. *Orthoperus minutissimus*, Matthews (?).  
(Pl. V. fig. 44.)

*Orthoperus minutissimus*, Matthews, Mon. Corylophidae, 1899, p. 196.

A single ♂, in bad preservation. Pitchy fuscous, legs and antennae lighter, shining and quite glabrous above. Thorax not (or scarcely) punctured. Elytra finely and sub-obsolete punctured, the punctures more than their own diameter apart. Ventrally the metasternum is impunctate in the middle, but its sides and the first abdominal segment have very fine punctures several times their own diameter apart. Wings not examined.

So far as can be seen in its bad condition, the specimen agrees in size, colour, and punctuation with an example in Matthews's Collection from Grenada, West Indies, placed as *O. minutissimus* \*. The two agree particularly in the form of the front tibiae, which are sharply incurved at the apex, the inner apical angle forming a sharp heel. Fig. 44 shows the right-hand front tibia in the West-Indian specimen.

*Loc.* Seychelles: Silhouette, from Mare aux Cochons, 1000 feet or more, ix. 1908. *O. minutissimus*, Matth., is recorded from South America and West Indies.

15. *Orthoperus* sp.

Among the material from Rangoon is a single specimen, perhaps not fully mature, of a very minute species, quite distinct from *O. munita* by the absence of the basal thoracic series of punctures. In size and punctuation of the upper surface it is not unlike the example from Silhouette described above and referred to *O. minutissimus*. It is just possible that it is a ♀ of that species, since it probably belongs to the ♀ sex, the front tibiae not being incurved and having no sharp heel. The metasternum appears quite impunctate, even at the sides; diverging striae perfectly distinct but not punctured. Determination or further description of this form is impossible in the absence of more material. Wings not examined.

\* The name and description of *O. minutissimus* are published in square brackets in Matthews's Monograph, from his own MS. notes, by P. B. Mason, editor of the Monograph. Mason gives reasons for thinking that Matthews probably intended to sink this name as a synonym of *O. perpusillus*, Matth. I have, however, provisionally retained the name *minutissimus*, since time has not admitted of an examination of Matthews's material sufficiently close to decide whether *minutissimus* and *perpusillus* are identical or not.

Length about 0·7 mm.

Loc. Rangoon : from nest of *Munia striata*, 9. x. 1911  
(Dr. H. H. Marshall).

# EXPLANATION OF THE PLATES.

NOTE.—The figures of whole insects are approximately, but not exactly, to scale : they are magnified between 47 and 57 diameters, in most cases 50–53 diameters.

## PLATE I.

- Fig. 1. *Sacium picaultianum*, sp. n.
- Fig. 2. Ditto. Mentum.
- Fig. 3. Ditto. Underside of prothorax and anterior coxæ.
- Fig. 4. *Sacium grossianum*, sp. n.
- Fig. 5. Ditto. Mentum.
- Fig. 6. Ditto. Underside of prothorax and anterior coxæ.
- Fig. 7. *Sacium roslanianum*, sp. n.
- Fig. 8. Ditto. Mentum.
- Fig. 9. *Sacium rochoninum*, sp. n. Mentum.
- Fig. 10. *Arthrolips insule-longæ*, sp. n. Outline.
- Fig. 11. Ditto. Punctation and pubescence of thorax and elytra, to larger scale.
- Fig. 13. *Daubania seychellarum*, gen. et sp. n.

## PLATE II.

- Fig. 12. *Meioderus quinssyanus*, sp. n.
- Fig. 13. *Sericoderus (Anisomeristes) seychellensis*, sp. n. Outline.
- Fig. 14. Ditto. Sculpture and pubescence of thorax and elytra, to larger scale.
- Fig. 15. Ditto. Antenna. 15 a, joints 3 and 4 more highly magnified.
- Fig. 16. *Sericoderus (Anisomeristes) pubipennis*, Sharp. Antenna. 16 a, joints 3 and 4 more highly magnified.
- Fig. 17. *Sericoderus* (s. str.) *lateralis*, Gyll. Antenna. 17 a, joint 3 more highly magnified, showing transverse line.

## PLATE III.

- Fig. 19. *Daubania seychellarum*, gen. et sp. n. Antenna.
- Fig. 20. *Oligarthrum waterhousei*, Matthews. Antenna (from Matthews, Mon. Coryloph. pl. iv. fig. C 7).
- Fig. 21. *Daubania seychellarum*. Labrum.
- Fig. 22. Ditto. Mandible.
- Fig. 23. Ditto. Maxilla.
- Fig. 24. Ditto. Labium.
- Fig. 25. *Lewisium seychelleanum*, sp. n. Antenna. 25 a, joints 3–6 more highly magnified.
- Fig. 26. *Lewisium ceylonicum*, Matthews. Antenna. 26 a, joints 3–6 more highly magnified.
- Fig. 27. *Lewisium seychelleanum*. Labrum.
- Fig. 28. *Lewisium* sp. Labrum (from Matthews, pl. v. fig. A 3).
- Fig. 29. *Catoptyr boeringi*, Matthews. Labrum (from Matthews, pl. vi. fig. B 3).
- Fig. 30. *Lewisium seychelleanum*. Mandible. 30 a, apex of another specimen from a different point of view.

## PLATE IV.

- Fig. 31. *Lewisium seychelleanum*. Maxilla.  
 Fig. 32. *Lewisium ceylonicum*. Maxilla.  
 Fig. 33. *Catoptyx bourringi*. Maxilla (from Matthews, pl. vi. fig. B 5).  
 Fig. 34. *Lewisium seychelleanum*. Labium.  
 Fig. 35. *Lewisium ceylonicum*. Labium.  
 Fig. 36. *Catoptyx bourringi*. Labium (from Matthews, pl. vi. fig. B 6).  
 Fig. 37. *Rhyphobius aquilinus*, sp. n. Outline.  
 Fig. 40. *Orthoperus munice*, sp. n.  
 Fig. 41. Ditto. Metasternum and first abdominal segment, middle and posterior coxal cavities shaded; *L*, diverging metasternal line or stria.

## PLATE V.

- Fig. 38. *Rhyphobius aquilinus*, sp. n. Antenna.  
 Fig. 39. *Glaucosoma velox*, Wollaston. Antenna.  
 Fig. 42. *Orthoperus munice*, sp. n. Anterior tibia and tarsus, ♂.  
 Fig. 43. Ditto. Ditto, ♀.  
 Fig. 44. *Orthoperus minutissimus*, Matthews. Anterior tibia and tarsus, ♂.

II.—Notes on *Exotic* Chloropidæ. By C. G. LAMB,  
 M.A., B.Se., Clare College, Cambridge.

THE following notes are based on material from two sources. The larger portion is the collection of Diptera in the Zoological Department of Cambridge University, and will be referred to as "Cam. Coll." In 1904 Mr. F. Muir presented a very large collection of Diptera from Africa to the Cambridge Museum, and his specimens will be marked "F. M." In addition, the Museum was indebted to Dr. G. A. K. Marshall for many other specimens from the same region, and there have been various other small accessory collections incorporated from time to time. The other portion consists of specimens kindly submitted to the author by Dr. G. A. K. Marshall—they are part of the extensive collection being formed by the Imperial Bureau of Entomology; this will be referred to as "Bur. Coll."

All the insects listed and described in the paper will be deposited in the British Museum, and hence no indication of the situation of the type-specimens will be given after the descriptions; they will all be in the British Museum.

The task of dealing with this family is enormously lightened and simplified by the valuable and complete monographs of Th. Becker, which bring the information